WHAT IS CLAIMED IS:

1. A control and protection system for an environmental conditioning system, comprising:

a first microcontroller;

a temperature input coupled to said first microcontroller;

at least two sensor circuits coupled to said first microcontroller, said at least two sensor circuits selected from a group consisting of: a power sensor circuit, a voltage sensor circuit, a current sensor circuit, and a terminal pin venting sensor circuit;

a user control coupled to said first microcontroller; and

a plurality of switching devices driven by said first microcontroller and adapted to control components of the environmental conditioning system, said first microcontroller driving said plurality of switching devices in response to evaluating signals received from said user control, said temperature input, and said at least two sensor circuits.

2. The control and protection system of claim 1, wherein said user control includes a device selected from a group consisting of a PDA, computer, modem, infrared transceiver, wireless transceiver, Internet Web-page server, Internet gateway, and computer network.

3. The control and protection system of claim 1, further comprising:

software associated with said first microcontroller, said software including operating parameters associated with said signals received from said temperature input and said at least two sensor circuits, and said software including limits associated with said operating parameters;

said software enabling said first microcontroller to operate said plurality of switching devices based on said limits and said operating parameters; and

said user control being capable of receiving at least one of said operating parameters and said limits from said first microcontroller.

4. The control and protection system of claim 3, wherein said user control is capable of transmitting at least one of said operating parameters and said limits to said first microcontroller.

5. The control and protection system claim 4, wherein said user control is capable of changing said limits.

6. The control and protection system of claim 1, wherein said power sensor circuit is capable of measuring real power.

7. The control and protection system of claim 1, further comprising a circuit card and wherein said first microcontroller and said at least two sensor circuits are mounted to said circuit card.

8. The control and protection system of claim 7, where said user control is mounted to said circuit card.

9. The control and protection system of claim 7, where said user control is remotely located from said circuit card.

10. The control and protection system of claim 7, where said user control includes a second microcontroller, a display device, and an input device.

11. The control The control and protection system of claim 10, where said input device includes a wireless communications device.

12. A control and protection system for an environmental conditioning system, comprising:

a microcontroller;

a plurality of modules selected from a group consisting of: a power sensor circuit, a voltage sensor circuit, a current sensor circuit, and a terminal pin venting sensor circuit, wherein said plurality of modules are coupled to said microcontroller and any one of said plurality of modules may be individually excluded from the control and protection system without affecting the functionality of the remaining ones of said plurality of modules;

a temperature input coupled to said microcontroller;

a user control coupled to said microcontroller; and

a plurality of switching devices driven by said microcontroller and adapted to control components of the environmental conditioning system in response to said microcontroller evaluating signals received from said user control, said temperature input, and said plurality of modules.

13. The control and protection system of claim 12, wherein said power sensor circuit is capable of measuring real power drawn by a compressor of the environmental conditioning system

14. The control and protection system of claim 12, further comprising:

software associated with said microcontroller, said software including operating parameters associated with signals received from said temperature input and said plurality of modules, and said software including limits associated with said operating parameters;

said software enabling said microcontroller to operate said plurality of switching devices based on said limits and said operating parameters; and

said user control being capable of receiving at least one of said operating parameters and said limits from said microcontroller.

15. The control and protection system of claim 14, wherein said user control is capable of transmitting at least one of said operating parameters and said limits to said microcontroller.

16. The control and protection system of claim 12, wherein said user control includes a device selected from a group consisting of a PDA, computer, modem, infrared transceiver, wireless transceiver, Internet Web-page server, Internet gateway, and computer network.

17. A control and protection system for an environmental conditioning system, comprising:

a local control having a first microcontroller;

a temperature input coupled to said first microcontroller;

an electrical sensing circuit mounted on said local controller and coupled to said first microcontroller;

a remote control having a second microcontroller;

a user control mounted on said remote control and coupled to said second microcontroller;

a communications interface coupling said first microcontroller and said second microcontroller; and

a plurality of switching devices mounted on said local control and driven by said first microcontroller and adapted to control components of the environmental conditioning system, said first microcontroller driving said plurality of switching devices in response to evaluating signals received from said user control, said temperature input, and said sensor circuit.

18. The control and protection system of claim 17, further comprising:

first software associated with said first microcontroller, said software including operating parameters associated with said signals received from said temperature input and said sensor circuit, and said first software including limits associated with said operating parameters;

said first software enabling said first microcontroller to operate said plurality of switching devices based on said limits and said operating parameters; and

second software associated with said second microcontroller, said second software enabling said second microcontroller to receive at least one of said operating parameters and said limits from said first microcontroller, and to transmit at least one of said operating parameters and said limits to said first microcontroller.

19. The control and protection system of claim 18, wherein said remote control includes a wireless transceiver coupled to second microcontroller.

20 The control and protection system of claim 18, wherein said remote control includes a device selected from a group consisting of a PDA, computer, modem, infrared transceiver, wireless transceiver, Internet Web-page server, Internet gateway, and computer network.

21. The control and protection system of claim 18, wherein said user control includes a display device and an input device; and said user control is capable of changing said limits.

22. The control and protection system of claim 17, wherein said sensor circuit includes a current sensing device.